DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-006223
Date Inspected: 06-Apr-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 730
OSM Departure Time: 1730
Location: Muroran, Japan

CWI Name: Chung Fu Kuan

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking, and Deviation Saddles

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. Art Peterson was present during the times noted above for observations relative to the work being performed in Fabrication shop #4 and Foundry at Japan Steel Works.

Fabrication Shop #4

NDT and Grinding operation of Saddle: Tower Saddle Segment T1-1 (cast and steel section)

The QA Inspector observed NIS NDT personnel Mr. R. Kumagai performing magnetic particle test (MPT) inspection (dry method) on the cover passes of weld joint no. 7Y-5L-2 and Mr. K. Kobayashi performing MPT inspection (dry method) on the cover passes of weld joint no. 7Y-9L-1, -2, -3, and -4 on rib plate to base plate complete-joint penetration groove welds of tower saddle segment T1-1. The QA Inspector also observed JSW personnel performing the grinding operation of the completed welds on top stiffener plate partial-joint penetration groove welds no's. 7ST-10, 7ST-11, 7ST-12, and 7ST-13. The QA Inspector observed that the MPT inspection and grinding operation was in process at the end of the QA Inspectors' shift.

Machining of Saddle: West Deviation Saddle Segment W2-E2 (cast and steel section)

The QA Inspector observed that west deviation saddle segment W2-E2 is located in Machine Shop #2 to have the final machining performed. The QA Inspector observed that the machining was in-process on this date.

Storage of Saddle: West Deviation Saddle Segment W2-E1 cast and steel section)

The QA Inspector observed that west deviation saddle segment W2-E1 has been moved to the storage yard. The QA Inspector observed that no work was performed on this date.

Storage of Saddle: Tower Saddle Segment T1-3 (steel section)

The QA Inspector observed that tower saddle segment T1-3 (steel section) is located in fabrication shop #4 for storage until tower saddle segment T1-3 (cast section) is ready for the fit-up operation. The QA Inspector observed that no work was performed on tower saddle segment T1-3 (cast section) on this date.

Grinding Operation of Saddle: West Deviation Saddle Segment W2-E3 (steel section)

The QA Inspector observed that JSW personnel completed the grinding operation on the rib plate's and stem plate's prepared edges (faces of double bevel grooves) of west deviation saddle W2-E3 (steel section). The QA Inspector observed that no work was performed on this date.

Grinding Operation of Saddle: West Deviation Saddle Segment W2-W1 (steel section)

The QA Inspector observed that west deviation saddle segment W2-W1 (steel section) is located in fabrication shop #4 to have the double groove weld bevel faces on the rib plates and stem plate profiled (ground to bright metal) with a grinder prior to the fit-up operation of west deviation saddle segment W2-W1 (cast section). The QA Inspector observed that no work was performed on this date.

Grinding operation of Saddle: Tower Saddle Segment T1-2 (cast and steel section)

The QA Inspector observed JSW personnel performing the grinding operation around the inside of the cope holes of the rib plates on tower saddle T1-2 in preparation for relocating the run-off plates. The QA Inspector observed that the grinding operation was in process at the end of the QA Inspectors' shift.

Temporary attachments on Saddle: West Deviation Saddle Segment W2-W2 (steel section)

The QA Inspector observed that JSW personnel were re-positioning the stay plate-(temporary attachment) located on the excess material of the rib plates. The purpose of the stay plates are for maintaining distortion control and dimensions between the ribs of west deviation saddle segment W2-W2 (steel section). The QA Inspector observed that the re-positioning of the of the stay plates were in process at the end of the QA Inspectors' shift.

Buttering operation on Saddle: Tower Saddle Segment T1-3 (cast section)

The QA Inspector observed the buttering weld operation on the square edge of the ribs (cast section) on tower saddle T1-3. The QA Inspector observed QC Inspector Mr. Chung Fu Kuan verify prior to the start of the welding operation that the preheat temperature of 150 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. T. Mitsui (07-4828) on rib (cast section) 9Y-10U, Mr. K. Kato (07-4510) on rib (cast section) 9Y-5U-2, and Mr. J. Yaegashi (07-2941) on rib (cast section) 9Y-12U-2 were in compliance with WPS SJ-3012-1-1 per the SMAW process in the flat position. The QA Inspector observed that the buttering weld operation was in process at the end of the QA Inspectors' shift.

Foundry Shop:

NDT operation of Saddle: West Deviation Saddle Segment W2-W2 (cast section)

The QA Inspector observed NIS NDT personnel Mr. H. Kohama performing the magnetic particle test (MPT) inspection (wet method) on west deviation saddle W2-W2 (cast section) on the as finished surface of level 1 areas on the outside of the trough section of the west deviation saddle. The NIS NDT Inspector verified the lifting force and the sensitivity of the yoke prior to the start of the MPT inspection. The QA Inspector observed that the MPT inspection was in process at the end of the QA Inspectors' shift.

Shaping operation of Saddle: East Saddle E2-E1 (cast section)

The QA Inspector observed that (1) JSW personnel was performing the shaping (scarfing) operation- (removal of cast material on the rough casting) outside the trough on east saddle E2-E1 to profile the trough section and rib section of the east saddle to the proper dimension and radius.

Grinding operation of Saddle: East Saddle E2-W1 (cast section)

The QA Inspector observed that (2) JSW personnel were performing the grinding operation on the outside of the east saddle E2-W1 (cast section) where the shaping operation was previously completed. The JSW personnel were performing the grinding operation to profile the shaped areas on the trough section and stem section of the saddle to a smooth finish prior to the NDT operation. The QA Inspector observed that the grinding operation was in process at the end of the QA Inspectors' shift.

Storage of Saddle: West Deviation Saddle Segment W2-W1 (cast section)

The QA Inspector observed that west deviation saddle W2-W1 (cast section) is located in the storage yard prior to being moved into fabrication shop #4. The QA Inspector observed that no work was performed on west deviation saddle segment W2-W1 (cast section) on this date.

Heat Treatment operation of Saddle: West Deviation Saddle Segment W2-W3 (cast section)

The QA Inspector observed that west deviation saddle W2-W3 (cast section) is located back in the foundry shop after the post weld heat treatment (stress relief) operation was completed on the major and minor weld repairs.

Rough Machining operation: West Jacking Saddle (cast section)

The QA Inspector observed that the west jacking saddle (cast section) is located in machine shop #4 to have the rough machining started on the west jacking saddle. The QA Inspector observed that no machining was performed on this date.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with applicable contract documents.

Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 510 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Peterson,Art	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer